

Claims

1. A method for the controlled release of a biologically active hydroxyl group containing substance on a substrate, which comprises reacting said hydroxyl group containing substance subsequently with a halogen-substituted aliphatic carboxylic acid halide and either a diamine containing at least one tertiary amino group or a heterocyclic aromatic amine, applying the thus obtained water-soluble ester to the substrate and finally hydrolysing the ester on the substrate.
2. A method according to claim 1 wherein the biologically active hydroxyl group containing substance is a drug, plant protective agent, insecticide, antimicrobial, flavouring agent or cosmetics.
3. A method according to claim 2 wherein the biologically active hydroxyl group containing substance is an insecticide or an antimicrobial.
4. A method according to claim 1 wherein the substrate is selected from wood, plastics, paper or textile material.
5. A method according to claim 5 wherein the substrate is paper or a textile fabric.
6. A method according to claim 1 wherein the halogen-substituted aliphatic carboxylic acid halide is acetyl chloride or 4-chlorobutanoic acid chloride.
7. A method according to claim 1 wherein the diamine containing at least one tertiary amino group is of general formula $R_1R_2N-A-NR_3R_4$ wherein R_1 and R_2 are independently C_1 - C_7 alkyl, R_3 and R_4 are independently H or C_1 - C_7 alkyl and A is a C_1 - C_7 linear or branched alkyl chain.
8. A method according to claim 7 wherein the diamine containing at least one tertiary amino group is 1,2-bis(dimethylamino)ethane.
9. A method according to claim 1 wherein the heterocyclic aromatic amine is an unsubstituted or substituted pyridine, bipyridyl, imidazole or oxazole.

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10. A method according to claim 1 wherein the heterocyclic aromatic amine is pyridine, 4-dimethylaminopyridine, 4-methoxypyridine, 4-cyanopyridine or 4,4'-bipyridyl.

11. An aqueous solution containing the reaction product of a biologically active hydroxyl group containing substance, a halogen-substituted aliphatic carboxylic acid halide and either a diamine containing at least one tertiary amino group or a heterocyclic aromatic amine.